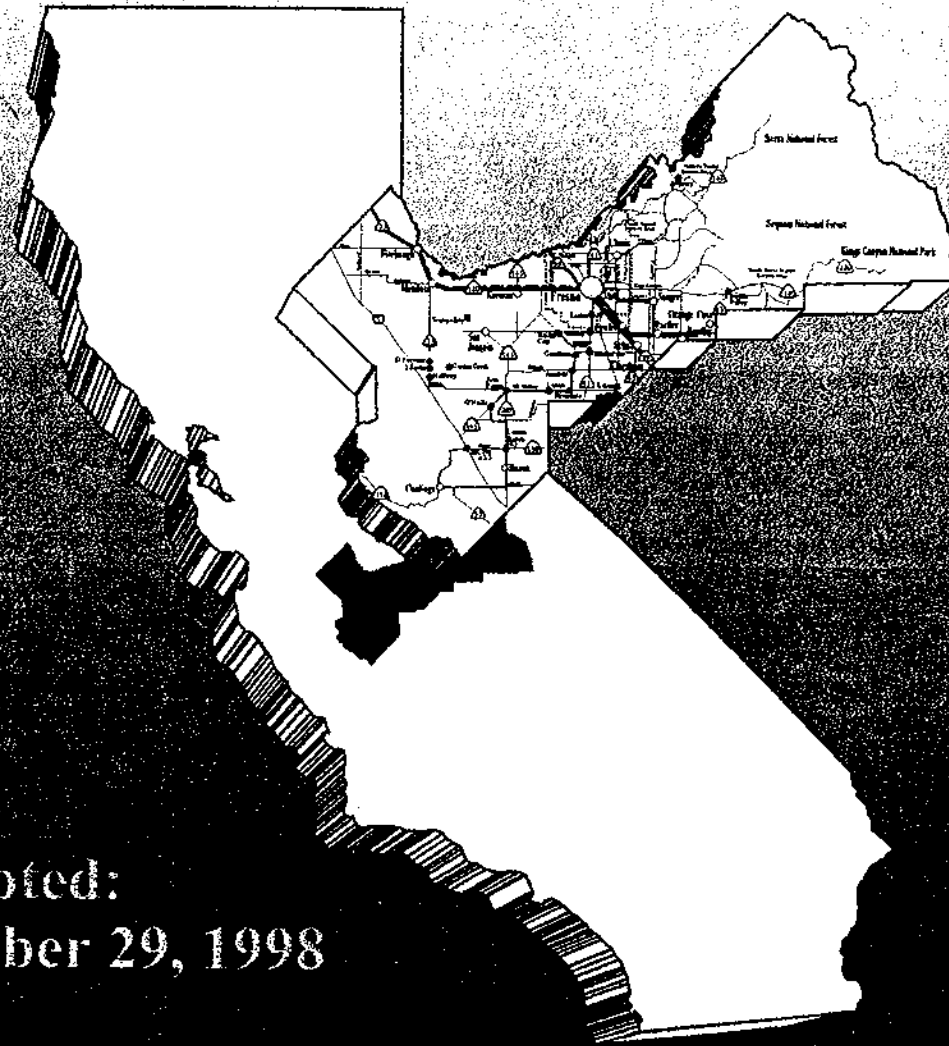


**THE COUNCIL OF FRESNO COUNTY GOVERNMENTS
1998 REGIONAL TRANSPORTATION PLAN EXCERPTS**

**SAN JOAQUIN VALLEY
REGIONAL TRANSPORTATION
OVERVIEW**

1998 REGIONAL TRANSPORTATION PLAN



Adopted:
October 29, 1998

Prepared By:
The Council of Fresno County Governments
2100 Tulare Street, Suite 619
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1998 REGIONAL TRANSPORTATION PLAN

Adopted on October 29, 1998

THIRTEENTH EDITION

COUNCIL OF FRESNO COUNTY GOVERNMENTS

**The Cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg
Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, Selma, and the County of Fresno**

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the Council of Fresno County Governments**

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REFERENCE SUMMARY OF COMMON ABBREVIATIONS

ARB	Air Resources Board
Caltrans	California Department of Transportation
COFCG	Council of Fresno County Governments
CTC	California Transportation Commission
CTSA	Consolidated Transportation Service Agency
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAX	Fresno Area Express
FCEOC	Fresno County Economic Opportunities Commission
FCMA	Fresno-Clovis Metropolitan Area
FCRTA	Fresno County Rural Transit Agency
FCTA	Fresno County Transportation Authority
FY	Fiscal Year
HOV	High Occupancy Vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation System
LTF	Local Transportation Fund
Measure "C"	Fresno County's self imposed 1/2% sales tax
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standard
OWP	Overall Work Program
PAC	Policy Advisory Committee
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
SHOPP	State Highway Operation and Protection Program
SIP	State Implementation Plan
SMSA	State Metropolitan Statistical Area
SRTP	Short Range Transit Plan
SSTAC	Social Services Transportation Advisory Council
STA	State Transit Assistance
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TCM	Transportation Control Measure
TEA-21	Transportation Equity Act for the 21 st Century
TIP	Transportation Improvement Program
TSM	Transportation Systems Management
TTC	Transportation Technical Committee

CHAPTER 1

SAN JOAQUIN VALLEY REGIONAL TRANSPORTATION OVERVIEW

1.1 EXECUTIVE SUMMARY

This chapter provides an inter-regional perspective to transportation planning within the San Joaquin Valley of California, consisting of the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings and the San Joaquin Valley portion of Kern. It addresses several issues of regional importance including air quality, highways, streets and roads, aviation, rail, goods movement and transportation demand efforts. The purpose of this chapter is to provide a broad overview of issues that cross jurisdictional boundaries.

1.1.1 VALLEY WIDE PLANNING

Under federal legislation described in the Inter-modal Surface Transportation Efficiency Act of 1991 (ISTEA) and its extending legislation, the Transportation Equity Act for the 21st Century (TEA-21), transportation planning efforts are directed to be coordinated in geographically defined air basins. The eight counties mentioned above do share an air basin and have many attributes in common. There are also differences that are significant in the context of transportation planning. The eight San Joaquin Valley counties have already implemented an aggressive program of coordinated Valley wide planning. In September of 1992 the eight Transportation Planning Agencies entered into a Memorandum of Understanding (MOU) to assure a coordinated regional approach to transportation and air quality planning efforts. The MOU goes well beyond the requirements of state and federal transportation planning acts by establishing a system of coordination of plans, programs, traffic and emissions modeling, transportation planning, air quality planning, and consistency in data analysis/forecasting. Development of the MOU and the ongoing process of coordinated planning has improved upon an already close working relationship between the eight Valley Transportation Planning Agencies and the representatives of the California Department of Transportation (Caltrans), California Air Resources Board, State Office of Planning and Research, San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD), and the Federal Highway Administration.

Each of the areas addressed in the Valley wide MOU have been assigned to a specific transportation planning agency to serve as a lead in the coordination of planning activities. Representatives of each of the eight agencies have been meeting regularly to coordinate the preparation of Regional Transportation Plans (RTPs), Regional Transportation Improvement Programs, and an aviation systems plan that involves not only the eight Valley counties but the Sacramento region as well. These cooperative efforts include both staff and financial assistance from Caltrans, California Air Resources Board, the Environmental Protection Agency, and the SJVUAPCD. These efforts have taken place as a voluntary response to the new issues, challenges and requirements facing the transportation planning community. The *San Joaquin Valley Regional Transportation Overview* represents the cooperative effort between the eight counties and their coordination in the Regional Transportation Plans.

1.1.2 THE EIGHT COUNTY SETTING

One issue that the eight counties have in common is a rapidly expanding population. In fact, all of the San Joaquin Valley counties exceeded the growth rate for California during the past five years (1993 to

1998) and six counties are in the top fifteen with the highest growth percentage of all fifty-eight California counties. Population growth is anticipated to continue.

The San Joaquin Valley is long and relatively narrow. Stretching about 300 miles from north to south and about 100 miles from east to west, it occupies an area between the two largest metropolitan areas in California, San Francisco and Los Angeles. Trending with the Valley, the major transportation facilities are Interstate 5, State Route 99, Union Pacific Railroad, Burlington Northern Santa Fe Railroad, numerous oil and natural gas pipelines, myriad telecommunication facilities, and air travel corridors. East to west transportation facilities are less numerous, but critical to the inter-regional transportation network of the West Coast and the western United States. Numerous highways and rail lines cross the Valley, including State Routes 58, 46, 152, 198, and 120 among others.

Air quality is a major issue. Many sections of the Valley are in non-attainment areas for a number of pollutants. Geographical situation, economic activity and population pressures tend to exacerbate air pollution within the region.

Both ends of the Valley are under growth pressures from huge metropolitan areas. Kern County population growth is being influenced by Los Angeles, while growth in Stanislaus, San Joaquin, and Merced counties is partially due to overflow growth from the San Francisco Bay area. Much of the residential growth observed has been caused by people searching for affordable owner-occupied housing within automobile commuting range of the large metropolitan areas.

A great deal of land in the San Joaquin Valley is used for agricultural production. Urban areas tend to be widely separated from each other and are developed at low densities. A majority of the locally developed road and rail network serves farm-to-market activity. Major transportation facilities serve as conduits between major metropolitan areas, and national recreation areas.

Economically, the region is tied to primary production. Agriculture production will always be a major industry because of the physical characteristics of the Valley. These characteristics include a nearly frost-free growing climate, long summers, reservoirs, and water distribution projects such as the Central Valley Project and the California State Water Project. However, direct employment in agriculture and other primary production (such as oil production) will continue to drop as production becomes more automated.

The San Joaquin Valley of California will continue to develop and become more populated. Many of the issues that are faced by individual county jurisdictions are of a regional nature and could benefit from regional coordination. Transportation is one of these issues and a continuing effort to plan, fund and construct transportation facilities on a regional basis will benefit both the residents of the San Joaquin Valley and the State of California.

1.2 SAN JOAQUIN VALLEY PROFILE

The San Joaquin Valley is the southern portion of the Great Central Valley of California. The San Joaquin Valley stretches from the Tehachapi Mountains in the south to the San Joaquin Delta in the north, a distance of nearly 300 miles. The eastern boundary is the Sierra Nevada Mountains, which reach elevations of over 14,000 feet, while the western boundaries are the lower coastal ranges. Total land area is approximately 23,720 square miles. The topography is generally flat to rolling, and the climate is characterized by long, very warm summers, and short, cool winters. Precipitation is related to latitude and elevation, with the northern portions of the valley receiving approximately 12-14 inches of rain a year, while the southern portion has an annual average of less than six inches. Snow rarely falls on the Valley floor, but heavy winter accumulations are common in the Sierra Nevada Mountains.



For the purposes of this report, the San Joaquin Valley is considered to include the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. Kern County straddles the Sierra Nevada Mountains and occupies a portion of the Mojave Desert. The desert portion of Kern County is within the Southeastern Desert Air Basin. This report addresses only that portion of Kern County that falls within the San Joaquin Valley Air Basin. See Exhibit 1-1.

Population growth has been sustained and significant. In 1960, the eight San Joaquin Valley counties had a population of just over 1.4 million. By 1991, their population had doubled to over 2.8 million (excluding the eastern portion of Kern County). The region experienced a 33.9 percent increase in population over the 1980s and grew at 16.7 percent in the 1990-1998 period. The San Joaquin Valley has grown faster than the state of California in each calculation period since 1960 and accounted for about 9.6 percent of the population of California in 1998. See Exhibit 1-2.

Future population growth is also expected to be sustained and significant. Population in the eight Valley counties is projected to exceed 5.8 million by the year 2020, using recently released growth projections from the California State Department of Finance. See Exhibit 1-3 and Exhibit 1-4.

The San Joaquin Valley is famous for agricultural production. Nearly ideal growing conditions, reservoirs, and water distribution projects, such as the federal Central Valley Project and the State Water Project have resulted in the top three agricultural counties in the Nation being in the San Joaquin Valley (Fresno, Tulare and San Joaquin Valley portion of Kern). Kern County oil fields produce two-thirds of the on-shore oil recovered in California. According to the 1990 US Census, the work force is structured as displayed in Exhibit 1-5. Agricultural activities and retail trade occupations account for over one-third of the employment in the San Joaquin Valley.

Educational attainment for San Joaquin Valley residents is outlined in Exhibit 1-6. San Joaquin Valley household income distribution is described in Exhibit 1-7 and Exhibit 1-8. San Joaquin Valley age structure is outlined in Exhibit 1-9 and Exhibit 1-10.

1.2.1 TRENDS AND ASSUMPTIONS

Changes in population, housing and employment alter travel demand and patterns that affect transportation facilities and services. By anticipating the magnitude and distribution of growth and change within the San Joaquin Valley, present day decisions can be made to capitalize on the positive aspects of the anticipated growth while minimizing the adverse consequences.

Population

Population growth within the San Joaquin Valley will continue into the foreseeable future. The driving force for the increasing population is the availability of land, the availability of water, the proximity of the urban centers of Stockton, Modesto, Fresno and Bakersfield to the large urban areas of Los Angeles and San Francisco, and the relatively low cost of land in the San Joaquin Valley.

Housing

Housing growth is generally a function of population growth. Housing is anticipated to grow at a rate similar to population growth.

Employment

Employment opportunities within the Valley will change over the time span of this plan. Agricultural employment will drop as a percentage of total employment as agricultural activities become more and more automated, requiring less human labor to accomplish more production. Services, wholesale trade and retail trade activities are anticipated to increase in importance in the future employment pattern of the Valley.

Other Trends and Assumptions

Cost of Travel

The cost of travel will increase for all modes as the price of fuel, equipment, labor and service continue to rise.

Automobile Use

The private automobile will continue to be the dominant and preferred method of travel within the region. Travel demand management programs may lessen the percent of trips made by private automobile.

Transit Use

Public transit use, including passenger rail, will keep pace with the rise in population and additional incentives, such as voluntary employer trip reduction programs, will be initiated to encourage additional transit use.

Aviation Activity

General and commercial aviation activity will increase as the regional population and economy expand.

Air Quality

Increases in hydrocarbons, oxides of nitrogen, carbon monoxide, and particulate matter may result as population increases. Efforts will be made to reduce the number of vehicle miles traveled (VMT). VMT reduction efforts will take several forms, including compensatory and possible compulsory ridesharing, flex-time work scheduling, and non-motorized commuting. Jobs to housing balance in local land use decision-making will become more important. Introduction of newer, cleaner fuels and more efficient internal combustion engines are also anticipated.

Railroad Activity

The California Inter-city High Speed Rail Authority is working toward the development and implementation of an inter-city high speed rail service. Current activity focuses on scoping and financing the Central Valley high speed rail service connecting the Los Angeles Basin and the San Francisco Bay Area. Amtrak will continue its successful San Joaquin runs between Bakersfield and Oakland, with bus feeder lines to southern California and other areas. Initial Amtrak rail service between Stockton and Sacramento is tentatively scheduled for October 1998.

Land Use

It is anticipated that agricultural land will continue to be converted to residential and commercial uses.

Exhibit 1-2 San Joaquin Valley Counties Population Growth

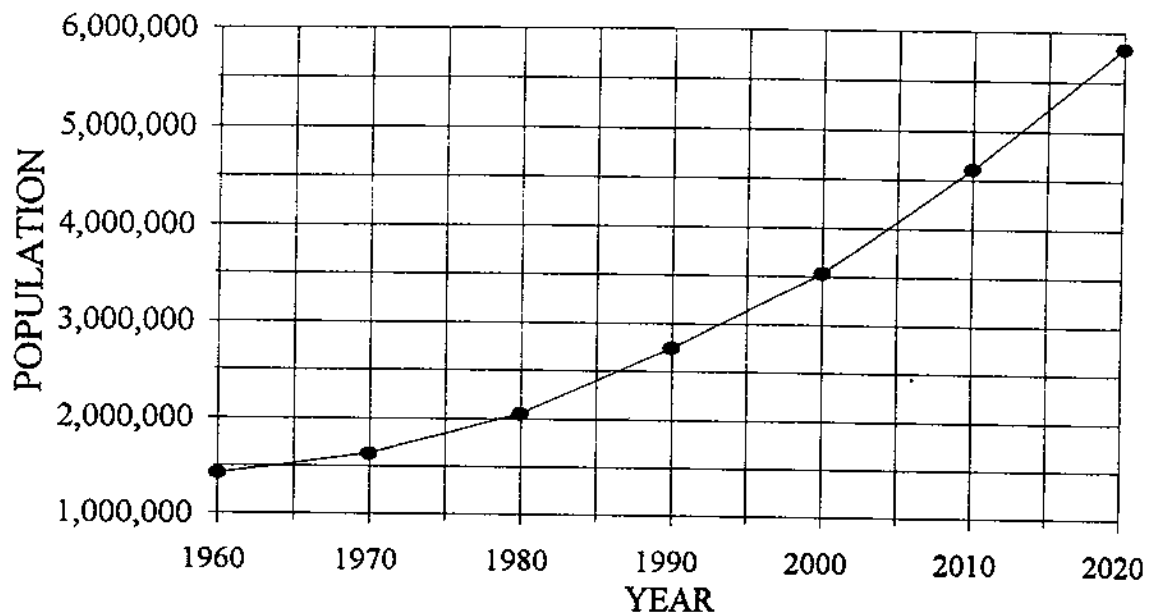
COUNTY	COUNTY SEAT	1970 POPULATION	1980 POPULATION	1990 POPULATION	JAN. 1, 1998 POPULATION
FRESNO	FRESNO	413,053	514,621	667,490	786,779
KERN	BAKERSFIELD	329,162	402,089	543,477	639,798
KINGS	HANFORD	64,610	73,738	101,469	122,848
MADERA	MADERA	41,519	63,116	88,090	114,349
MERCED	MERCED	104,629	134,560	178,403	204,422
SAN JOAQUIN	STOCKTON	290,208	347,560	480,628	545,249
STANISLAUS	MODESTO	194,506	265,900	370,522	427,642
TULARE	VISALIA	188,322	245,738	311,921	360,352
SAN JOAQUIN VALLEY COUNTIES TOTAL		1,626,009	2,047,322	2,742,000	3,201,439
CALIFORNIA TOTAL		19,053,134	23,667,902	29,760,021	33,251,809
S.J. VALLEY COUNTIES % OF CALIFORNIA		8.53%	8.65%	9.21%	9.63%

COUNTY	% GROWTH 1970-1998	ANNUAL % GROWTH 1970-1998	% GROWTH 1980-1998	ANNUAL % GROWTH 1980-1998
FRESNO	90.48%	2.35%	52.89%	2.42%
KERN	94.37%	2.42%	59.12%	2.65%
KINGS	90.14%	2.34%	66.60%	2.92%
MADERA	175.41%	3.72%	81.17%	3.40%
MERCED	95.38%	2.44%	51.92%	2.38%
SAN JOAQUIN	87.88%	2.30%	56.88%	2.57%
STANISLAUS	119.86%	2.88%	60.83%	2.71%
TULARE	91.35%	2.37%	46.64%	2.18%
SAN JOAQUIN VALLEY COUNTIES TOTAL		96.89%	56.37%	2.55%
CALIFORNIA TOTAL		74.52%	40.49%	1.93%

COUNTY	1990 LAND USE (Sq.Miles)	1990 TOTAL HOUSING UNITS	1998 POPULATION DENSITY (Pop./Sq.Mile)
FRESNO	5,963	235,563	131.95
KERN	8,141	198,636	78.59
KINGS	1,389	30,843	88.41
MADERA	2,138	30,831	53.46
MERCED	1,928	58,410	106.02
SAN JOAQUIN	1,399	166,274	389.71
STANISLAUS	1,494	132,027	286.21
TULARE	4,824	105,013	74.71
SAN JOAQUIN VALLEY COUNTIES TOTAL		27,276	117.37
CALIFORNIA TOTAL		155,973	213.19

Sources: U.S. Bureau of the Census, 1970, 1980, and 1990. State of California Department of Finance, 1998

Exhibit 1-3 San Joaquín Valley Counties Population Growth Projection



Sources: U.S. Bureau of the Census, and State of California Dept. of Finance, released April 1997
Note: The figures include the total population of each of the eight counties in the San Joaquin Valley.

Exhibit 1-4 San Joaquin Valley Counties Population Growth Projection

COUNTY	Population April 1, 1960	Population April 1, 1970	Population April 1, 1980	Population April 1, 1990	Population July 1, 2000	Population July 1, 2010	Population July 1, 2020
Fresno County	365,945	413,329	514,621	667,490	874,100	1,163,100	1,505,500
Kern County	291,984	330,234	403,089	544,981	726,800	958,300	1,220,300
Kings County	49,954	66,717	73,738	101,469	129,800	164,300	202,800
Madera County	40,468	41,519	63,116	88,090	124,300	162,000	203,200
Merced County	90,446	104,629	134,560	178,403	220,500	294,300	380,100
San Joaquin County	249,989	291,073	347,342	480,628	585,600	745,500	920,900
Stanislaus County	157,294	194,506	265,900	370,522	477,300	628,400	793,600
Tulare County	168,403	188,322	245,738	311,921	387,900	491,900	612,000
San Joaquin Valley Counties	1,414,483	1,630,329	2,048,104	2,743,504	3,526,300	4,607,800	5,838,400

Sources: U.S. Bureau of the Census, and State of California Dept. of Finance, released April 1997

Exhibit 1-5 San Joaquin Valley Counties Employment By Industry

	San Joaquin Valley Counties Employment	San Joaquin Valley Counties Percentage	California Percentage
EMPLOYED PERSONS OVER AGE 16	1,082,466	100.00%	100.00%
Agriculture, forestry and fisheries	123,142	11.38%	3.10%
Mining	12,558	1.16%	0.28%
Construction	75,073	6.94%	6.85%
Manufacturing, non-durable goods	65,627	6.06%	5.37%
Transportation	61,135	5.65%	11.49%
Communications and other public utilities	44,942	4.15%	4.18%
Wholesale trade	49,800	4.60%	4.57%
Retail trade	176,891	16.34%	16.31%
Finance, insurance and real estate	58,630	5.42%	7.59%
Business and repair services	49,921	4.61%	5.83%
Personal services	28,808	2.66%	3.53%
Entertainment and recreational services	11,823	1.09%	2.05%
Health services	81,774	7.55%	7.30%
Educational services	93,905	8.68%	7.37%
Other professional and related services	61,099	5.64%	7.24%
Public administration	62,342	5.76%	4.44%

Source: 1990 Census, Summary Tape File 3A

Exhibit 1-6 San Joaquin Valley Counties Educational Attainment

	San Joaquin Valley Counties Total	San Joaquin Valley Counties Percentage	California Percentage
PERSONS 25 YEARS AND OVER	1,604,073	100.00%	100.00%
Less than 9th grade	277,814	17.32%	11.16%
9th to 12th grade, no diploma	263,225	16.41%	12.65%
High school graduate	389,338	24.27%	22.29%
Some college, no degree	337,229	21.02%	22.60%
Associates degree	117,643	7.33%	7.94%
Bachelor's degree	152,040	9.48%	15.29%
Graduate or professional degree	66,784	4.16%	8.07%

Source: 1990 Census, Summary Tape File 3A

Exhibit 1-7 San Joaquin Valley Counties Household Income Distribution

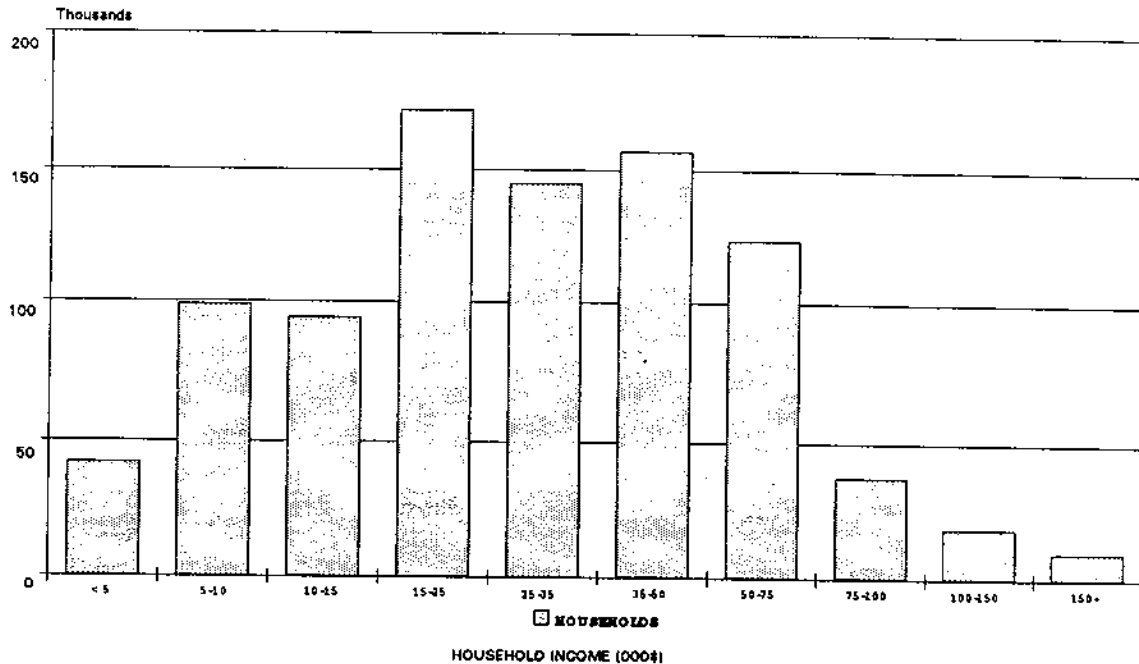


Exhibit 1-8 San Joaquin Valley Counties Household Income Distribution

INCOME IN 1989	San Joaquin Valley Counties Households	San Joaquin Valley Counties Percentage	California Percentage
HOUSEHOLDS	898,334	100.00%	100.00%
Less than \$5,000	41,977	4.67%	3.88%
\$5,000 - \$9,999	98,926	11.01%	7.63%
\$10,000 - \$14,999	94,374	10.51%	7.37%
\$15,000 - \$24,999	171,829	19.13%	15.16%
\$25,000 - \$34,999	144,691	16.11%	14.72%
\$35,000 - \$49,999	156,763	17.45%	18.16%
\$50,000 - \$74,999	123,158	13.71%	18.36%
\$75,000 - \$99,999	37,400	4.16%	7.65%
\$100,000 - \$149,999	19,028	2.12%	4.58%
\$150,000 or more	10,188	1.13%	2.48%

Source: 1990 Census, Summary Tape File 3A

Exhibit 1-9 San Joaquin Valley Counties Age Structure

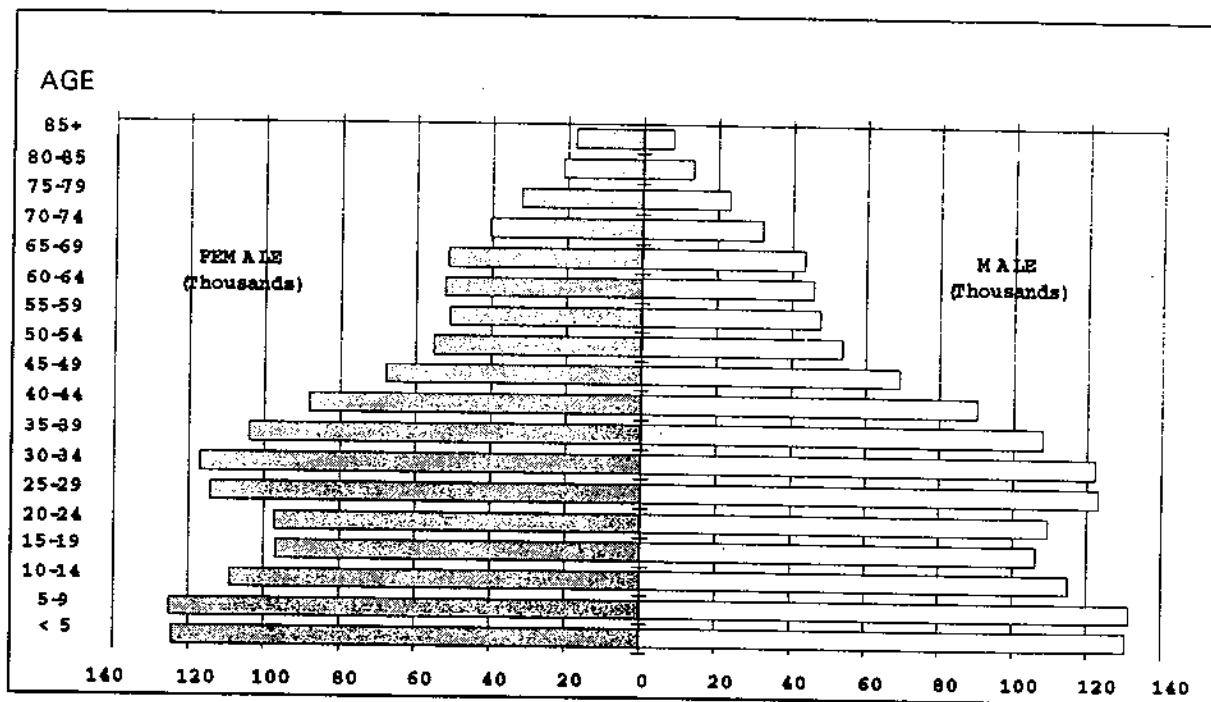


Exhibit 1-10 San Joaquin Valley Counties Age Structure

AGE	Female	Male
Under 5 years	124,325	130,520
5 to 9 years	125,000	131,525
10 to 14 years	109,114	115,236
15 to 19 years	96,948	106,313
20 to 24 years	97,361	109,584
25 to 29 years	114,343	123,095
30 to 34 years	117,140	122,336
35 to 39 years	104,198	107,960
40 to 44 years	88,376	90,330
45 to 49 years	68,033	69,286
50 to 54 years	55,212	53,923
55 to 59 years	51,092	47,934
60 to 64 years	52,372	46,000
65 to 69 years	51,514	43,713
70 to 74 years	40,411	32,326
75 to 79 years	32,319	23,328
80 to 84 years	21,228	13,455
85 years and over	18,065	8,085
TOTAL	1,367,051	1,374,949

Source: 1990 Census

1.3 SAN JOAQUIN VALLEY POLICY ELEMENT

This Policy Element has been developed to set forth the common transportation goals, objectives, and policies as expressed in the existing eight Regional Transportation Plans of the San Joaquin Valley counties. To move toward effective cooperation, it is first advantageous to define the areas of commonality, which when accepted by the eight agencies will enable the next step of defining more specific objectives and policies to be pursued. This version of the Policy Element is only designed to achieve the first objective, noting the areas of commonality. Staff members of the eight agencies will then work progressively toward developing a 2000 update to deal more effectively with areas of common concern. Also included in the 2000 update will be a full discussion of financial resources to meet the Valley needs; this subject is not well enough defined as yet to be undertaken as a separate element within this overview.

The Regional Transportation Plans of the following eight counties were used as input into this overview: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare.

This cooperative effort as mandated by two separate Memorandums of Understanding between the eight agencies demonstrates that the eight counties are coordinating their programs and plans in a two-fold effort:

1. To meet the requirements of federal legislation, specifically ISTEA and its extending legislation, TEA-21, as well as the Federal Clean Air Act Amendments; and more importantly,
2. To address those issues that have a Valley wide impact and, therefore, a direct impact on each of the eight counties.

Before listing the goals, objectives, and policies, it is important to have a broad understanding of the intent behind each of the terms. These terms are defined in the adopted California Regional Transportation Plan Guidelines.

A "goal" is the end toward which effort is directed; it is general in application and timeless.

An "objective" provides clear, concise guidance to attaining the goal. Objectives are successive levels of achievement in movement toward a goal. They are results to be achieved by a stated point in time. Individual objectives are capable of being quantified and realistically attained.

A "policy" is a direction statement that guides present and future decisions on specific actions. Policies should support the attainment of objectives.

1.3.1 TRANSPORTATION GOALS, OBJECTIVES, AND POLICIES

GOAL: Design, develop and maintain a multi-modal transportation system which efficiently and safely moves people and goods, and also serves the social, economic and physical needs of Valley residents while enhancing their quality of life.

Objectives:

- A multi-modal circulation network which is convenient, safe and efficient.
- A multi-modal circulation network which is both cost effective and environmentally sound.
- A transportation system that meets the travel demands of both citizens and businesses.

Policies:

- ▶ Facilitate a cooperative effort between the public and private sectors to integrate transportation modes through a coordinated transportation planning process, carried out by the eight regional transportation planning agencies.
- ▶ Work with public transit and social service agencies to assist in implementing "welfare-to-work" programs.
- ▶ Involve citizens and businesses in planning transportation facilities and services. Special efforts will be made to include those individuals and groups who may not have been included in the past. These groups may include the elderly, infirm, and racial/ethnic minorities, including Native Americans. Working with these and other groups, strategies that address transportation issues of importance to under-served groups will be developed. Direct involvement by under-represented groups will be promoted in transportation planning, project selection, and other transportation issues that affect them.
- ▶ Support transportation planning and programming efforts.
- ▶ Minimize conflicts between modes.
- ▶ Assure that the existing transportation facilities are maintained and repaired as necessary to continue serviceability.
- ▶ Emphasize improvement of existing facilities, thereby increasing capacity and flow.
- ▶ Cooperatively work toward a transportation system that will widen the mode choice available to travelers and shippers.
- ▶ Support the implementation of Transportation System Management, Transportation Demand Management, and Transportation Control Measures that reduce emissions from the circulation system. This support shall include consultation with the San Joaquin Valley Unified Air Pollution Control District.
- ▶ Support transportation systems that have the lowest feasible levels of energy consumption while meeting reasonable mobility needs.
- ▶ Promote the development of State Route 99 for the high speed rail corridor connecting Los Angeles and the San Francisco Bay Area.

GOAL: Develop and finance multi-modal transportation facilities and services that are consistent with regional and local growth policies and are consistent with state and federal air quality plans.

- Objectives:**
- Prepare Regional Transportation Improvement Programs that list multi-modal transportation facility improvements/operations in a financially constrained manner and are in conformance with adopted California State Implementation Plans for air quality purposes.
 - Work to attain and maintain National Air Quality Standards in the San Joaquin Valley.

Policies:

- ▶ Use the Public Utilities Commission notification of any rail line abandonment proposals to facilitate the evaluation of possible impacts on the transportation system and encourage the development of alternative uses for the facilities.

- ▶ Analyze the impact of all transportation proposals to ensure they are cost effective.
- ▶ Make maximum use of state and federal funds available for transportation.
- ▶ Make new system enhancements when warranted and brought about by growth/development when it is economically feasible and environmentally sound.
- ▶ Maximize the use of Inter-regional Improvement Program (IIP) funds through partnerships within the San Joaquin Valley counties and with Caltrans.
- ▶ Work directly with the San Joaquin Valley Unified Air Pollution Control District in the development phases of both air quality plans and transportation plan and programs.
- ▶ Improve air quality through a cooperative effort of stationary, mobile, and transportation source controls.

GOAL: Define, preserve and enhance Valley transportation corridors.

Objectives: • Ensure that Valley wide multi-modal circulation is maintained and improved, thereby serving the social, economic, and physical needs of Valley residents.

Policies:

- ▶ Coordinate planning efforts to define a system of corridors of Valleywide importance.
- ▶ Cooperatively determine appropriate measures to pursue preservation and improvement of the defined corridor system.
- ▶ Promote the recognition of strategic and significant Valley routes as Focus Routes and Gateways defined in the *Inter-regional Transportation Strategic Plan*.

GOAL: Maintenance of the existing transportation system.

Objective: • Preserve existing transportation facilities and where practical, develop ways to meet transportation needs by using existing transportation facilities more efficiently.

Policies:

- ▶ Allocate sufficient resources to maintain current system at the current level of repair.
- ▶ Pursue additional funding to increase level of maintenance to correct deficiency.
- ▶ Encourage creative transportation demand management policies to utilize existing facilities more efficiently.

GOAL: Encourage land use design which is more efficient and conducive to multi-modal choice and the use of transit, non-motorized and rail alternatives.

Objective: • Support land uses that are in the interest of the general community by encouraging population densities and patterns that are conducive to transit and non-motorized transportation options.

Policies:

- ▶ Advise decision-makers on land use issues to favor compact development.

- ▶ Discourage non-contiguous development that is widely separated from existing urban services.
- ▶ Promote the concept of "jobs-housing" balance in new and existing development.
- ▶ Encourage infill development to raise population density in existing settings.

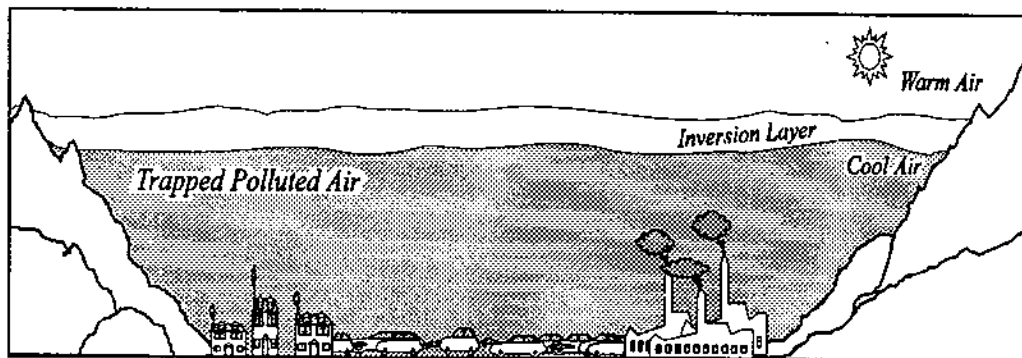
1.3.2 AIR QUALITY

Introduction

The San Joaquin Valley faces a serious environmental problem--air quality. Both the state and federal government set standards and monitor air quality based on the need to protect public health. Despite 20 years of legislation and regulation, the San Joaquin Valley still does not meet all air quality standards. The three major pollutants of concern are:

- Ozone
- Carbon Monoxide (CO)
- Suspended Particulate Matter (PM10 & PM2.5)

The severity of the problem directly relates to Valley topography and climate. The Valley has a warm, sunny climate, a relatively flat valley floor, and is surrounded by mountain ranges. Air pollutants generated from other air basins as well as activity in the Valley floor become trapped by an inversion layer caused by cool air masses, held captive by the Coastal and Sierra Nevada Mountain Ranges, and held down by the sun-warmed air expanding above the Valley.



Pursuant to Federal law, the United States Environmental Protection Agency has designated the entire Valley a non-attainment area for ozone and particulate matter. The metropolitan areas of Fresno, Modesto, Stockton and Bakersfield were recently upgraded to maintenance areas for carbon monoxide. The Valley is unique within the nation and is not typical of most air basins. The ozone attainment area encompasses eight counties and contains six separate and distinct metropolitan areas amidst millions of acres of farmland. The travel patterns also vary between each metropolitan area.

Problem Causes

The traditionally recognized sources of air pollution are broken into two categories as follows:

Stationary/Area Sources - examples are:

- Fuel Combustion (oil and gas production, other manufacturing/industrial/agricultural)

- Solvent Use (dry cleaning, printing, de-greasing, asphalt paving)
- Industrial Processes (food and agriculture, mineral processes)
- Waste Burning (agricultural debris, range management)
- Petroleum Processes (oil and gas extraction, petroleum refining and marketing)
- Miscellaneous Processes (landfills, unplanned fires, pesticide application)

Mobile Sources - examples are:

- On-Road Vehicles (automobiles, trucks, motorcycles)
- Other Mobile (off-road vehicles, trains, aircraft, utility equipment)

In addition to the sources listed above, the California Clean Air Act requires that emissions from "indirect" sources be examined and, where feasible, control measures be proposed to reduce or mitigate their impacts. The Federal Clean Air Act defines an "indirect" source as a facility, building, structure, installation, real property, road, or highway that attracts mobile sources of pollution.

Transportation Control Measures

Both the California Clean Air Act and the Federal Clean Air Act require the implementation of all feasible Transportation Control Measures, that is, measures designed to reduce trip-making activity. This is a major challenge, as these measures are intended to affect public behavior—specifically driving habits. Both state and federal laws recognize that traditional control programs on stationary and mobile sources are reaching their limits of effectiveness, and that further progress in achieving reductions will increasingly rely on control of personal activity. Transportation plans adopted within the Valley must provide for timely implementation of these measures and must provide further assurance to federal funding agencies that the transportation plans "conform" to the adopted State Implementation Plan (SIP) for air quality.

Existing Efforts

The United States Environmental Protection Agency and the United States Department of Transportation, through the mechanism of transportation conformity, require a cooperative effort between themselves, Caltrans, the eight transportation planning agencies and the San Joaquin Valley Unified Air Pollution Control District. Currently, the eight Valley transportation planning agencies and the San Joaquin Valley Unified Air Pollution Control District have entered into a Memorandum of Understanding to ensure a coordinated transportation/air quality planning approach. The MOU defines a cooperative process aimed at maximum effectiveness and compatibility of both air quality and transportation plans. The MOU establishes a strong working relationship between the eight TPAs and satisfies ISTEA and TEA-21 requirements by having a cooperative agreement between agencies located in the same non-attainment boundary.

A more specific MOU provision is the participation by the transportation planning agencies in the development of transportation control measures required pursuant to state and federal law. The eight agencies committed staff and analytical support necessary to develop motor vehicle emission inventories, emission budgets, draft ozone SIP revisions, a work plan and transportation control measures. These were submitted for consideration by the SJVUAPCD and for inclusion in its air quality attainment plans, which are ultimately incorporated into the SIP for the San Joaquin Valley. As a part of this effort, a consultant was retained to develop a "San Joaquin Valley Transportation Control Measure Coordination, Implementation/Monitoring and Enforcement Program." This contract resulted in the publication of the "San Joaquin Valley Transportation Control Measure Program." The

publication presents current levels of commitment to existing transportation control measures that can be implemented by 1999, and a method of evaluating costs and benefits of suggested measures. All eight transportation planning agencies participated in providing technical and policy input on the work done by the consultant.

Transportation modeling for air-quality conformity purposes is yet another area of cooperative effort between the eight agencies. Discretionary grants, to a maximum of \$200,000, were obtained for development of a Valley-wide modeling strategy. The funds were used to hire a consultant to help determine the most appropriate direction of model development, data collection and required analytical capabilities that should be undertaken either jointly or individually by the Valley transportation planning agencies. The objective was to satisfy air-quality conformity requirements with product(s) that will withstand review by the US Department of Transportation and the US Environmental Protection Agency.

Dowling and Associates was hired to develop a Valleywide modeling strategy in response to the conformity requirements of the State Implementation Plan (SIP). The strategy included recommendations on the appropriate model development, data collection and required analytic capability. To complete the task, Systems Application International was hired to assist the transportation planning agencies develop interagency consultation procedures and delineate the roles and responsibilities of those agencies. The products of those consultant contacts were ultimately incorporated into the transportation conformity SIP that was submitted to the Environmental Protection Agency.

Given the wide diversity of planning issues facing the individual TPA staff and the logistics of Valleywide coordination, the Valley TPAs have hired an "Air Quality Coordinator". This position is funded by the eight TPAs. The goals of the position are to:

- Monitor Valley TPAs compliance with federal and State clean air act requirements;
- Coordinate and provide on-going communications between Valley TPAs and the SJVUAPCD, as well as other involved agencies: Caltrans, EPA, FHWA, CARB, FTA, etc.
- Document the TPA air quality transportation planning process and the TPA's role in regulatory compliance;
- Facilitate development of improved modeling data;
- Provide technical air quality transportation planning assistance to individual TPAs;
- Provide unified TPA representation at meetings, workshops and public hearings; and
- Achieve consistent TPA communication.

Assumptions/Future Needs and Issues

Many of the most effective tools for reducing the impact of motor vehicle emissions are not within the control of local government, such as Regional Transportation Planning Agencies. Local agencies do not have the authority to set vehicle exhaust standards, to determine the number of vehicles registered for use, and have limited ability to influence the national or state production standards that would make alternative fuels a marketplace reality. That type of authority rests at the state and federal levels. In addition, effective economic tools such as tax incentives for low emissions vehicles, registration surcharges for high pollution vehicles, and general gasoline tax rates lie with the state and federal regulatory and legislative arenas. Local agencies, therefore, cannot be expected to bear the sole responsibility for attaining air quality standards. Improving air quality will take a cooperative effort on the part of federal, state and local agencies, with continued emphasis on aggressive on-board emission

control measures at the state and national levels. Local agencies can be expected to complement those measures through adoption of transportation control programs.

Local land use decisions do affect air quality, and decision-makers need to consider the transportation/air quality link. Where local agencies can be effective in their land use decisions is by giving consideration to development impact with respect to mode availability, i.e., pedestrian, bicycle, auto and transit. Examples of local regulatory authority that can affect individual mode choice include subdivision design/amenities, parking requirements, and trip reduction ordinances.

The relationship of individual activities to pollution has long been understood, but the control of individual actions has not been viewed as the most effective approach to air pollution control. The implementation of transportation control measures, however, does address the issue of what is generally referred to as "basic life style" changes. Public reaction to these measures will be closely monitored, and careful consideration must be given to how new programs will affect individuals in their choice of transportation modes.

- The demand for transportation services is affected by a variety of factors:
- Per capita vehicle ownership and use (both increasing at higher rates than population);
- Regional center and facility siting decisions;
- Residential proximity to employment and commercial centers;
- Convenience and efficiency of local transportation systems, in particular those related to automobile traffic; and
- Comparative cost of each transportation alternative.

The challenge is to establish a reasonable balance between the legitimate demand for a safe and convenient transportation system with individual access to a broad range of services and equally legitimate environmental and conservation concerns. Implied is a heightened awareness of the impacts of growth and development on local conditions. The relationship of land use patterns to regional scale traffic flow must be emphasized and considered as an integral part of the process to improve air quality.

A safe and convenient transportation system must be maintained. It is important that reasonable alternatives to daily use of single-occupant vehicles be developed and made available to the public. The combination of public acceptance of the need for change, and the availability of reasonable alternatives to encourage that change, should lead to long-term changes in individual travel behavior.

Short-Range Strategy

- Support maintenance of aggressive state programs to control hydrocarbon, nitrogen oxide, and carbon monoxide emissions through on-board controls.
- Support District activities to ensure compliance with Environmental Protection Agency regulations for motor vehicle inspection and maintenance programs.
- Support state and federal programs to promote development of alternative fuel sources.
- Continue the cooperative effort between the eight transportation planning agencies and the District in providing coordinated transportation/air quality planning.
- Continue to cooperate/consult with the District in its activities aimed at achieving air quality standards.

- Achieve maximum air quality benefits from funding sources that target motor vehicle emission reductions.

Air Quality Conformity

The November 15, 1990 Amendments to the Federal Clean Air Act (FCAAA), placed tough new requirements on the sources and causes of air pollution in areas that fail to meet federal standards, including the San Joaquin Valley. The FCAAA require substantial reductions from all pollution sources, including the transportation sector, and establishes a conformity requirement to ensure that those reductions are achieved.

The term "air quality conformity" refers to the process whereby transportation plans, programs and projects are shown to conform to the requirements of the FCAAA and the applicable State Implementation Plan (SIP). Specific regulations and requirements are contained in the Environmental Protection Agency's (EPA) latest Transportation Conformity Rule, dated August 15, 1997. These requirements vary by specific pollutant, but can include build/no build tests, improvement over the 1990 base, and adherence to a specific "emissions budget" for volatile organic compounds (VOC), carbon monoxide, nitrogen oxides, and particulate matter.

1.3.3 SPECIFIC TRANSPORTATION STRATEGIES & MODAL ACTION PLANS

Introduction

The specific transportation strategies used throughout the eight counties are classified under three programs: Transportation Demand Management, Transportation Control Measures, and Transportation Systems Management. Each of the eight counties is currently using a combination of the three programs to manage the vehicular flow on their streets, roads and highways.

Transportation Demand Management

Transportation Demand Management (TDM) consists of efforts to influence behavior regarding how, when, and where people travel. TDM strategies are designed to reduce vehicular trips during peak hours by shifting trips to other modes of transportation. TDM may also reduce trips by providing jobs and housing balance. TDM is specifically targeted at the work force that generates the majority of peak hour traffic. In each of the eight counties, a ridesharing outreach program is designed to educate employers and employees about the benefits of reducing trips. Some of the TDM strategies include the following techniques:

- Rideshare programs
- Transit usage
- Flex hours
- Vanpools
- Bicycling & walking
- Telecommuting
- Mixed land uses

By educating people, TDM strategies can be implemented and utilized within the circulation system. However, in order to change travel habits, employers must identify transportation alternatives and encourage employees to reduce single occupant vehicle trips.

Transportation Control Measures

Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce motor vehicle emissions. The San Joaquin Valley is designated as a non-attainment air basin under both the California Clean Air Act (CCAA) and the Federal Clean Air Act (FCAA). Both Acts require implementation of TCMs. The CCAA requires that TCMs be implemented to achieve an average vehicle ridership of 1.5 persons per vehicle by 1999 during commute periods. Additionally, the CCAA requires regions to develop a TCM plan and to show that there is no net increase in vehicle emissions after 1997. The CCAA states the TCM plan shall:

- Establish the quality of emission reductions.
- Include a schedule for implementation.
- Identify potential implementing agencies.
- Identify any agreements necessary for implementation.
- Identify procedures for monitoring effectiveness.
- Identify procedures for monitoring compliance.

The FCAA requires that regions implement all reasonably available control measures. Section 108(f) of the FCAA provides a list of TCMs that regions should consider implementing. The SJVUAPCD has committed to implementing TCMs in the Revised 1993 Ozone Rate of Progress Plan, the Revised Post 1996 Ozone Rate of Progress Plan, the Ozone Attainment Demonstration Plan (1994), and the PM10 Attainment Demonstration Plan (1997).

TCM's will continue to play a role in the Valley's air quality efforts. The following TCMs encompass a diverse range of programs that are recommended by the SJVUAPCD:

- Rideshare programs
- Park-and-ride lots
- Telecommunications
- Alternate work schedules
- Trip Reduction Ordinance
- High Occupancy Vehicle Lanes
- Bicycle Facilities
- Pedestrian Facilities
- Public Transit
- Maintenance of vehicle emission control systems
- Use of low emission fuel

Congestion Management System

With the passage of the Intermodal Surface Transportation Efficiency Act of 1991, all urban areas in the nation are required to have a Congestion Management System (CMS). The federal CMS requirements are similar to the optional California requirements; in fact, the CMS was largely modeled after the California program. Both programs are structured around the identification and monitoring of a system, the establishment of performance standards, and the identification and correction of congestion problems.

The Final Rule for the Federal Management and Monitoring Systems defines an effective CMS as a systematic process for managing congestion that provides information on: 1) transportation system performance, and 2) alternative strategies for alleviating congestion and enhancing the mobility of persons and good to levels that meet state and local needs. This process includes the following six elements:

1. Methods to monitor and evaluate the performance of the multi-modal transportation system, identify the causes of congestion, identify and evaluate alternative actions, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions;
2. A definition of parameters for measuring the extent of congestion and for supporting the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies;
3. The establishment of a program for data collection and system performance monitoring to define the extent and duration of congestion, to help determine the causes of congestion, and to evaluate the efficiency and effectiveness of implemented actions;
4. Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies, such as: transportation demand management measures, traffic operational improvements, Intelligent Transportation Systems (ITS) technologies, and system capacity;
5. Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy proposed for implementation; and,
6. Implementation of a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures.

Transportation Systems Management

Transportation Systems Management (TSM) is designed to identify short term, low cost capital improvements that improve the operational efficiency of the existing transportation infrastructure. An effective TSM program using the appropriate techniques can improve circulation and reduce automobile emissions throughout a region. TSMs are an important tool endorsed by the SJVUAPCD and State to obtain air quality standards and congestion management levels-of-service. Furthermore, TSM strategies are used in coordination with TDMs and TCMs to improve our local and regional environment. Some of the TSM strategies include the following Traffic Flow Improvements:

- Traffic signal synchronization
- Traffic engineering improvements (geometric)
- Channelization
- One way streets
- Turning and bus pocket bays
- Bus Terminals
- Removal of on street parking
- Limit arterial street access
- Street & Highway widening
- Bicycle facilities
- Pedestrian Malls

Applicable Regions

In the Central Valley, TSM strategies are currently in practice in all eight counties. The cities that experience severe traffic congestion during peak hours will benefit most from implementing TSMs.

Strategies

TSMs are most effective in densely populated communities rather than on a regional Valley-wide scale. However, implementing some of the applicable TSMs on a regional basis will require a cooperative effort among the eight counties. There are TSM alternatives available for reducing traffic congestion regionally in the Central Valley (i.e. coordinate traffic signals). TSMs have several advantages that influence the environment and circulation system. By using TSM improvements, the circulation system becomes efficient and environmentally sensitive toward air quality. According to the Air Resource Board, vehicles that travel at a constant speed below 55 mph have fewer toxic emissions than vehicles that must stop, idle, and then accelerate at each traffic signal. The optimal speed for oxides of nitrogen (NOx) is between 20-35 mph and for reactive organic gases (ROG) is between 30-50 mph. TSMs are an effective and inexpensive option compared to building new facilities. Many TSM techniques are available for cities to study and implement into their circulation system. The Central Valley will continue to support and communicate inter-regionally on programs that help improve air quality and congestion to satisfy the SJVUAPCD and State standards.

1.4 ACTION ELEMENTS

1.4.1 HIGHWAYS, STREETS AND ROADS

Introduction

The eight counties that comprise the San Joaquin Valley have extensively planned systems of streets and roads. Each of these single county systems is designed to meet the demands for three types of travel: local, regional, and inter-regional. This section of the San Joaquin Valley Regional Transportation Plan focuses on the inter-regional components of each system. However, it is important to note that an effective inter-regional road system depends on sufficient regional and local facilities to provide access to inter-regional facilities and to provide capacity for local trips.

Existing Inter-regional Facilities

For several years, neighboring transportation planning agencies, Caltrans, and the Federal Highway Administration have coordinated single county, local and regional components of the street and road system in the Valley to ensure that the needs of inter-regional travelers have been met. In some cases, neighboring agencies have entered into more formal agreements to address multi-county problems.

Intended to serve as a long range planning tool for the state transportation system, the Inter-regional Road System (IRRS) was adopted by Caltrans in the early 1990s. The IRRS was developed to provide a highway system that was sufficient to meet the demand for travel between urban areas. Exhibit 1-11 identifies the IRRS road system within the eight-county San Joaquin Valley. This could be thought of as the San Joaquin Valley Inter-regional Road System (SJVIRRS). The facilities that are on SJVIRRS, including the portions through urbanized areas, are those that are most important to Valley wide travel. By including the urbanized portions of IRRS routes in the conceptual SJVIRRS, the system meets the need for connectivity of roads between metropolitan areas and rural areas.

The San Joaquin Valley component of the IRRS provides access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations. Moreover, extensions of Interstate 5, north and south of the Valley, provide access to border crossings into Canada and Mexico.

With respect to the movement of people and goods in the eight-county region, Interstate 5 and State Route 99 provide the most-significant capacity. Many state routes provide major connections between Interstate 5 and State Route 99 as shown in Exhibit 1-11.

Inter-regional Issues

Each of the eight, single county RTPs addresses significant issues (either explicitly or implicitly) in transportation planning today. While several of these issues are local or regional in focus, three issues are significant on a Valley wide basis.

1. Aging highway network

The average design life of a State Highway facility is 20 years. However, most of the facilities on the San Joaquin Valley Inter-regional Road System were originally constructed prior to 1970. Many do not meet today's design standards, particularly within urban areas. Others, such as Interstate 5, are declining in condition.

Pursuant to Senate Bill 45 (SB 45), Caltrans has maintenance and operational responsibility for the State Highway System via the SHOPP Program. Regardless of how the improvements are funded, it is clear that preservation of inter-regionally significant roads is vital to the economic interests of the Valley.

2. Population growth and the implications for transportation

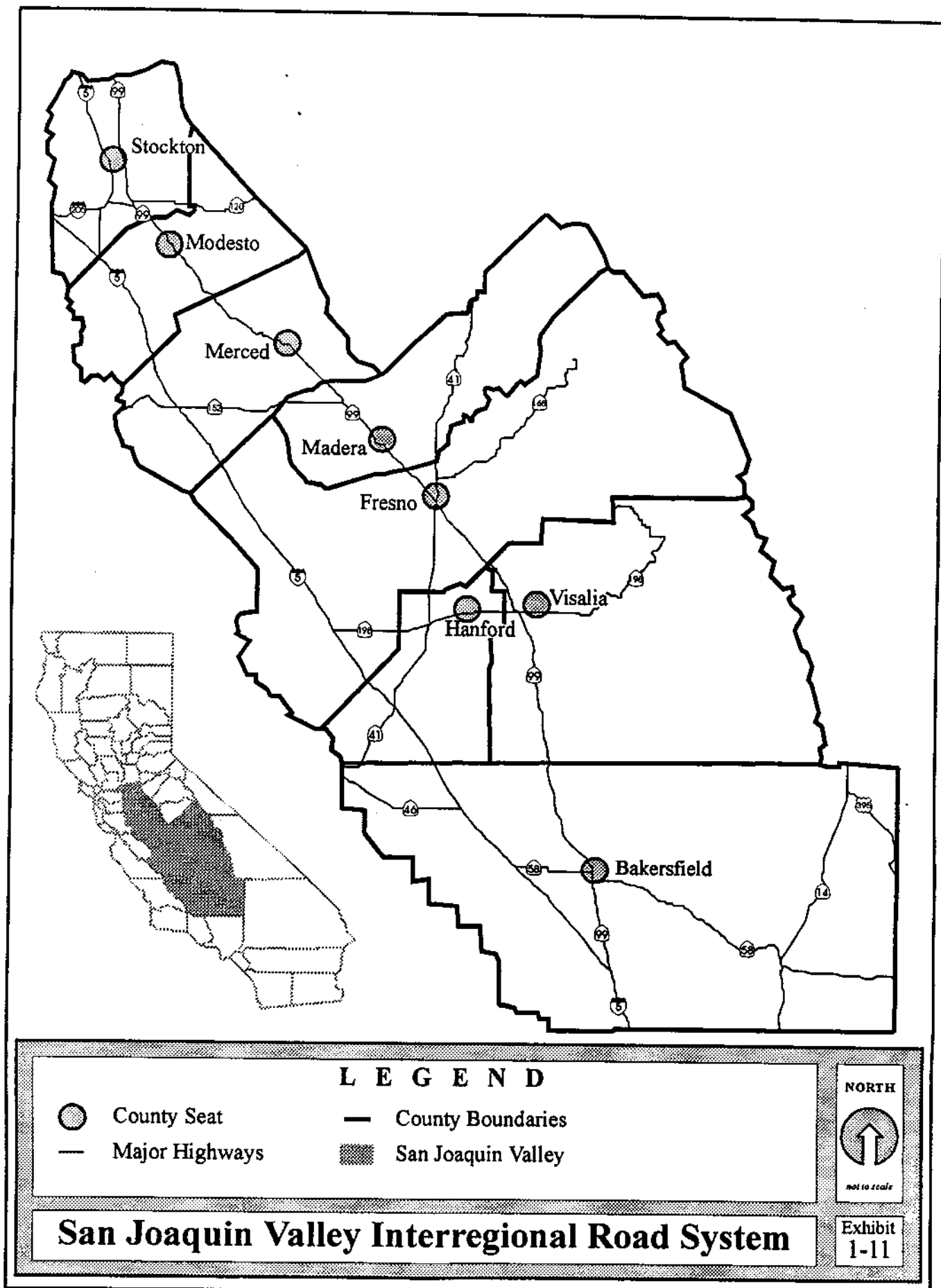
Each of the eight Valley counties has experienced higher-than-average rates of population growth during the 1990s. Despite the recent economic recession in the state, projections by the Department of Finance and local transportation planning agencies anticipate above-average population increases in the Valley for many years to come.

This growth (past and projected) has a significant implication for inter-regional transportation facilities. While travel demand has risen in proportion to the increase in population, the state's investment in the highway system has not kept pace.

3. Increased levels of truck traffic

The California economy is largely based upon the efficient movement of goods, including the movement of raw materials to manufacturing and processing plants, as well as the movement of finished products to market. While goods are moved through a variety of modes (including rail, air, and pipeline), most are moved by trucks over roadways. The large-scale abandonment of railroads since 1980 and the expansion of the highway system since World War II have combined to cause a major shift in freight movement from rail to trucks.

The increase in freight movement over State highways is now growing faster than increases in capacity. Moreover, the fastest growing segment of the truck traffic are trucks with five or more axles; the State of California is under pressure to allow "triples" (trucks with three trailers) on selected state highways.



Truck traffic has three significant effects on highway transportation. First, high truck volumes affect pavement life and in effect the cost of rehabilitating highway facilities. Second, high truck volumes affect capacity by constricting flow, thereby leading to a reduced level of service. Third, high volumes of truck traffic affect the safety of State highways; the conflict between passenger vehicles and large trucks is more pronounced when trucks are present in large numbers.

4. Lack of adequate and stable state highway financing.

It is imperative that the state pursue a stable and consistent source of funding for the transportation infrastructure needs. The California Transportation Plan, underscores that need by stating that "methods of financing the transportation system will be evaluated and recommended to achieve adequate funding levels and equity in the distribution of transportation costs and benefits."

Current state highway financing is a mix of state and federal dollars, augmented by a wide variety of local funds such as transportation sales taxes and development impact fees. As the state begins to rely more heavily on local financing, it has become apparent that the use and scope of such local funding programs have no consistency throughout the state. In developing a program to provide adequate state transportation revenues, the state must consider sources that are administered equitably and consistently on a state-wide basis.

5. State Route 99

State Route 99 is a major component of the California State Highway system, stretching nearly 500 miles from Red Bluff to past Bakersfield, generally parallel to Interstate 5. However, unlike Interstate 5, State Route 99 connects each of the major urbanized areas in the San Joaquin Valley, including Bakersfield, Visalia, Fresno, Modesto, Merced, and Stockton. State Route 99 attracts high volumes of inter-city commercial truck traffic which serves the Valley's economic activities. Truck traffic on State Route 99 ranges from 18% to 37% of total volume.

Much of State Route 99 is a six-lane facility (mostly in Kern County), but a majority of the route is a four-lane facility. Numerous segments of State Route 99 are classified as an expressway-class facility with at-grade intersections at rural arterials. Safety and deterioration of the facility are issues of common concern to the Valley Regional Transportation Planning Agencies (RTPAs).

Highway Improvements

Each single county RTP includes a funding-constrained action plan. These action plans have been prepared through extensive local and regional planning processes to best address regional needs with projected resources. This section intentionally does not address specific projects or inter-regional priorities. To the extent necessary, future transportation plans for the San Joaquin Valley will address project-specific actions and inter-regional priorities.

In the interim, single county transportation planning agencies in the Valley are encouraged to consider the objectives, goals, and policies identified in the Policy Element of this chapter, and the significant issues identified in this section when establishing regional priorities.

Relationship to Caltrans Systems Planning Process

Caltrans has been actively involved in the development of this section. Each District's System Management Plan has been reviewed and considered in the development of this section.

Action Plan

Short Range Plan/Long Range Plan

Federal Highway Administration

- Continue to provide funding for projects that will maintain and expand inter-regional routes, regional routes, and local routes.

State of California - Department of Transportation and California Transportation Commission

- Continue to program projects that will enhance inter-regional routes and access to inter-regional routes.
- Maintain and preserve inter-regional routes and routes that provide access to inter-regional routes.
- Identify and implement operational improvements on inter-regional routes and routes that provide access to inter-regional routes.

Metropolitan Planning Organizations/Regional Transportation Planning Agencies

- Continue to coordinate planning of inter-regional transportation facilities to the extent necessary and feasible.
- Continue to support efforts by state and federal agencies to program priority projects that enhance inter-regional transportation.
- Support and participate with Caltrans in corridor studies on State Route 99.

Local Agencies - Cities and Counties

- Continue to maintain and improve local facilities.
- Participate in the planning of regional and inter-regional facilities.

1.4.3 RAIL

Introduction

In general, rail facilities are privately owned. Passenger service is provided by the National Rail Passenger Corporation, referred to as Amtrak. Freight service is provided by private rail corporations, primarily the Union Pacific Railroad and the Burlington Northern Santa Fe Railroad. In recent years, regional transportation planning agencies in the eight Valley counties have had an enhanced role in the planning of inter-regional passenger rail service and rail freight movement.

Existing Inter-regional Rail Facilities

Rail facilities are located throughout the San Joaquin Valley. Many of these facilities provide for long distance movement of goods. In particular, several facilities owned by the Union Pacific Railroad and the Burlington Northern Santa Fe Railroad stretch for significant lengths north-south through the Valley. These are connected at locations up and down the Valley by several shorter, east-west lines, owned by a number of different companies, such as the San Joaquin Valley Railroad.

Valley passenger rail service is provided by Amtrak *San Joaquins* service routed between Oakland/Sacramento, Fresno, Bakersfield and Los Angeles. The *San Joaquins* provide four round trips daily through the Valley. Connecting bus service is provided north and west of Stockton to Sacramento and destinations surrounding Sacramento, as well as the South Bay Area. Connecting Amtrak bus service is also provided south of Bakersfield to the Los Angeles area and other destinations in Southern California. The *San Joaquins* also provide connecting service to long-distance nationwide trains. The *San Joaquins* service includes stops in the Valley cities of Stockton, Riverbank, Denair, Merced, Madera, Fresno, Hanford, Corcoran, Wasco, and Bakersfield.

Inter-regional Issues

Passenger Rail

In 1987, members of the California State Department of Transportation (Caltrans) San Joaquin Task Force formed a committee to take a more active role in developing suggestions for improving the Amtrak *San Joaquins* service. This committee, known as the San Joaquin Valley Rail Committee is comprised of representatives from each of the counties served by the trains, and representatives of interested counties served by the connecting bus network. The committee serves as an advisory body to Caltrans and Amtrak on issues pertaining to the *San Joaquin* service.

Recent efforts of the San Joaquin Valley Rail Committee include the adoption of a Strategic Growth Plan for the San Joaquin Corridor. This report became a significant resource to the Caltrans Rail Program in their work efforts to prepare a business plan for the *San Joaquins* intercity rail corridor.

In recent years Committee work has focused on:

1. Increasing service frequencies and improving on time performance.
2. Improving the utilization of equipment so as to get the maximum number of car miles from this expensive equipment.
3. Extending service to fill the gaps in the current route. Sacramento-Stockton through train service is the first priority. The second priority is to extend through service with and existing train on an overnight schedule from Bakersfield to Los Angeles with connections to San Diego.
4. Continuing efforts to make incremental track and signal system upgrades to improve speed, efficiency and capacity.
5. Creating a fare structure to maximize revenue per passenger mile.
6. Restructuring on board services in order to satisfy the travel needs of passenger train travelers.
7. Increasing the level of public awareness of the *San Joaquins* so that citizens of the communities along the route think of the *San Joaquins* as their trains and communities along the route develop a pride of ownership.

In March, 1998, the State of California Department of Transportation Rail Program issued its *San Joaquin Corridor FY 1998-99 Business Plan*. The Business Plan identifies short term actions aimed at making the service more attractive to potential riders. Some highlights of the Plan include:

- Implementing a fifth round trip, operating between Bakersfield and Sacramento.
- Opening new stations in Fresno, Merced, Modesto, and Martinez.

- Complete final engineering for the next phase of track and signal improvements with an emphasis on projects that will reduce train running times.

High Speed Rail

In addition to state and regional planning efforts and interest in conventional inter-city passenger rail service, the State of California has made progress in establishing High Speed Rail service.

To investigate whether high speed rail might be appropriate for California, the Governor and Legislature authorized Senate Concurrent Resolution 6 (SCR 6) in 1993. SCR 6 establish a nine-member Intercity High speed Rail Commission to assess the feasibility of a high speed rail system in California. The Commission determined that high speed rail is technically, environmentally, and economically feasible once constructed, and would be operationally self sufficient. The Commission recommended a statewide high speed rail network 676 miles long. The network will link all of California's major population centers: Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, and San Diego. The Commission recommended that the service be routed through the Central Valley roughly parallel and adjacent to State Route 99. The construction of a high speed rail system in California will be a public works program on the scale of the State Water Project or the creation of the state's freeway system.

Implementing the high speed rail project is the responsibility of the Intercity High Speed Rail Authority, created by Senate Bill 1420 in 1996 and signed by the Governor in September 1996. The Authority is required to direct the development and implementation of intercity high speed rail service that is fully coordinated with other public transportation services. The Authority is required to prepare a plan for the construction and operation of a high speed train network for the state capable of achieving speeds of at least 200 mph, that is consistent with and continues the work of the Intercity High Speed Rail Commission. The Authority has all the powers necessary to oversee the construction of a statewide high speed rail network, but will sunset should it fail to gain approval of a high speed rail funding measure by November 2000.

The Authority held its first meeting on November 13, 1997. During this first meeting the Authority determined that their timeline will focus on the year 2000 for securing financing for the high speed rail system.

Freight Rail

Central California is a major corridor for freight/goods movement. The highway system, and in particular State Route 99, is at times overwhelmed with truck traffic. In an effort to relieve congestion on highways, streets, and roads, several planning efforts are underway to enhance the efficient movement of freight and more efficiently use existing transportation facilities.

In 1992, Caltrans District 6 prepared a report titled *Freight Movement in the San Joaquin Valley*. The report identifies key issues relating to goods movement and concludes with several recommendations, including "...modifying truck traffic demand over state highways by encouraging alternatives to highway freight movement. A logical alternative especially to long haul freight through the San Joaquin Valley would be to take advantage of available capacity on rail mainlines."

Another collaborated effort in rail planning has been made by the City of Fresno, the Union Pacific Railroad, the Burlington Northern Santa Fe Railroad, Caltrans, the Council of Fresno County Governments, Madera County Transportation Commission, and Fresno County. This effort was

directed at estimating the cost of consolidating the Burlington Northern Santa Fe tracks into the Union Pacific corridor to eliminate freight train travel through the center of the City of Fresno.

Action Plan

Short-Range Plan

Federal Government

- Continue to fund Amtrak service.

State of California

- Continue financial support of Amtrak service.
- Implement the *San Joaquin Corridor* FY 1998-99 Business Plan, specifically:
 - ◆ Implement the fifth round trip with direct service linking Bakersfield to Sacramento;
 - ◆ Open new stations in Fresno, Merced, Modesto, Martinez;
 - ◆ Complete final engineering for the next phase of track and signal improvements;
 - ◆ Develop a marketing/public relations program campaign for the fifth train and new stations;
 - ◆ Monitor the feeder bus network and make appropriate adjustments;
 - ◆ More clearly define the checked baggage procedures and promote use of the service;
 - ◆ Explore the feasibility of providing a premium service on all trains;
 - ◆ Explore the potential for contracting out food service;
 - ◆ Work with the San Joaquin Valley Rail Committee to coordinate with local on-line cities to increase community involvement;
 - ◆ Coordinate schedules with other Amtrak services where feasible.
- Continue cooperative planning and coordination with recommendations of the San Joaquin Valley Rail Committee.

Regional Transportation Planning Agencies

- Participate in the San Joaquin Valley Rail Committee and support the committee recommendations.
- Monitor the planning and analysis work of the California High Speed Rail Authority and participate in the planning effort to ensure that Valley interests are appropriately reflected.
- Support state and federal actions that would increase accessibility to passenger rail service. The Central Valley passenger rail system should be designed to fully integrate the larger intermodal passenger transportation network including multi-modal stations that provide convenient and direct access to all appropriate state, regional, and local modes, including, where applicable, urban commuter, inter-city and high speed rail service, regional and local bus service, airport shuttle services, and other feeder services that provide intermodal linkage.

Long-Range Plan

Federal Government

- Continue to fund Amtrak service.

State of California

- Continue financial support of Amtrak service.
- Implement the recommendations of the San Joaquin Valley Rail Committee.

Regional Transportation Planning Agencies

- Participate in the San Joaquin Valley Rail Committee and support the committee recommendations.
- Support state and federal actions that would increase accessibility to Amtrak service.

1.4.4 AVIATION

Introduction

Aviation facilities within the eight county San Joaquin Valley are used for the inter -regional movement of persons and goods. Each of the eight San Joaquin Valley counties has a system of aviation facilities designed to meet the local and regional needs of its municipalities. The eight RTPAs representing the counties participated with Caltrans in the development of the region's first Central California Aviation System Plan (CCASP). The CCASP was completed in January 1998 to include the Valley's fifty public use airports that serve the aviation needs in the Valley. Each county was responsible for preparing their CCASP document for Caltrans to use in the California Aviation System Plan (CASP). The CCASP analyzes each county's aviation system. The contents of the CCASP include an inventory of services and operations, forecasting of future needs, financial sources and needs, and systems requirements to meet the needs of aviation over the next twenty years.

Existing Facilities

A variety of aviation facilities are available in the San Joaquin Valley. A few of these facilities serve inter-regional aviation needs. Local public use airports serve the county's general aviation needs. Kings County's Lemoore Naval Air Station is the only remaining military airport in the San Joaquin Valley. Castle Air Force Base in Merced and Crows Landing Naval Air Station in Stanislaus were converted to civilian use airports in 1995. There are four facilities in the Valley that provide inter-regional commercial aviation service: Modesto Airport, Fresno Yosemite International Airport, Meadows Field (Kern County), and Visalia Municipal Airport. Stockton Metropolitan Airport currently does not carry commercial services, however, Farmington Fresh, a local produce packaging business, has located at the airport to transport fresh produce around the world. The remaining Valley airports offer services that include chartering, agricultural spraying, fire fighting, recreational activities, and medical emergency facilities.

Inter-regional Issues

Inter-regional air service for commercial service is an important issue in the Valley. High fares and inconvenient service have made commercial aviation difficult to access for the public, and commercial air service out of the Valley is perceived as inadequate. Existing services are essential for the Valley to

maintain connections with the major hub airports of San Francisco and Los Angeles. Fresno Yosemite International Airport has traditionally served as the major hub airport in the Valley, but has had difficulty keeping major air carriers and jet service established there. In addition, airline deregulation had an adverse effect on aviation in the San Joaquin Valley in the late 1970s resulting in decreased service and higher fares. Despite these setbacks, aviation use is expected to grow over the next twenty years as the Valley's population and economy continue to expand.

Aviation Systems

State law PUC 21701 requires Caltrans to update the CASP every five years. Caltrans contracted with the ten RTPAs in the Valley and the Sacramento area to develop the CCASP using a grant from the Federal Aviation Administration (FAA). These federal funds allowed Caltrans and the Valley agencies to prepare individual aviation plans to assist Caltrans in updating the CASP for the Valley region. The CCASP was completed with each RTPA developing and adopting their Aviation Plan, which includes the following elements:

- The Inventory Element contains the existing conditions and services at each airport.
- The Forecasts Element contains projections of future demand through the year 2020, in five year increments.
- The System Requirements Element includes projected aviation needs through the year 2020 in five year increments.
- The Action Element identifies strategies and projects to implement the plan.
- The Financial element identifies local, state, and federal funding sources, and methods of allocating future funds.

Airport Land Use Commissions

Included in the Valley RTPs is a status evaluation of airport land use commissions and their progress in implementing comprehensive land use plans.

Coordination

Valley wide coordination efforts have been achieved through the CCASP process with Caltrans. Components of this section are drawn from the aviation sections of each of the eight Valley RTPs, and as such are consistent with the eight RTPs. Each of the RTPs is coordinated with the appropriate airport master plans, comprehensive land use plans, regional aviation systems plans, and the California Aviation System Plan.

Action Plan

Short-Range Plan

Federal Aviation Administration

- Continue to fund airport projects, including projects that enhance inter-regional aviation facilities.

State of California

- Complete the California Aviation System Plan.
- Continue to fund airport projects, including projects to enhance inter-regional aviation facilities.

- Continue to provide matching funds for federally funded airport projects.

Regional Transportation Planning Agencies

- Maintain the regional aviation system plans.
- Update Regional Transportation Plans to be consistent with the California Aviation System Plan, and regional aviation system plans, as necessary.

Local Agencies

- Continue to expand aviation facilities, as needed.
- Promote increased commercial air service to major Valley airports.

Long-Range Plan

Federal Aviation Administration

- Continue to fund airport projects, including projects to enhance inter-regional aviation facilities.

State of California

- Continue to fund airport projects, including projects to enhance inter-regional aviation facilities.
- Continue to provide matching funds for federally funded airport projects.

Regional Transportation Planning Agencies

- Update Regional Transportation Plans to be consistent with the California Aviation System Plan, and regional aviation system plans, as necessary.

Local Agencies

- Continue to expand aviation facilities, as needed.
- Promote increased commercial air service to major Valley airports.
- Support a Valley international airport with immigration services.

1.4.5 GOODS MOVEMENT

Introduction

The movement of goods plays an important role in the overall economy of the San Joaquin Valley. As one of the prime agricultural regions in the nation, the intra-county road linkage of goods to processing plants, and the inter-county linkage of goods to other regions, manufacturers, and shipping ports is essential. Not only is the San Joaquin Valley a leading agricultural producer, it is also a prominent producer of oil and other minerals. These industries rely heavily on bulk movement by truck, rail, pipeline, and other transportation modes.

The regional highway system is a particularly vital aspect in the movement of people and goods. The Valley serves as a distribution center for the state, and major highways, rail lines, pipelines, and air corridors traverse the Valley in all directions. The Valley's transportation system serves as an east-west

and north-south linkage to major markets. These facilities, teamed with the internal movement of goods, particularly agricultural products, make commodity movement an important economic factor to Valley prosperity. Also of great significance to the transport of goods is the Port of Stockton, located in San Joaquin County at the northern end of the San Joaquin Valley. The Port is an integral part of the state transportation system and is the second largest inland seaport on the west coast.

Transportation planning has traditionally emphasized the movement of people; often the importance of large trucks, rail, ship and air cargo is overlooked in the technical transportation planning process. Consideration must be given to material movement needs and its coexistence with other modes of transportation.

Existing Facilities

Trucks

Trucking is the most commonly used mode for transporting freight. Goods movement by truck is popular because of its flexibility, timely delivery, and efficiency for haul distances of up to 500 to 600 miles. Trucking, however, can be more expensive than other modes for longer hauls because of its higher energy costs. Commodity movement by this mode is a major cause of street and highway surface failures necessitating a high level of street and highway network maintenance.

Heavy trucks contribute to the damage of roads much faster than do automobiles; however, deferred maintenance and water intrusion into the roadbed continue to be the primary causes of road damage. As a result, Valley streets and highways are subject to rapid deterioration and failure. According to the American Association of Highway Officials a fully loaded truck (80,000 pounds) has a significant impact on a roadway; equal to the passage of approximately 9,600 cars.

Major inter-regional highway corridors experience relatively high volumes of heavy (3 to 5 axle) truck traffic, usually between 16-24 percent of the annual average daily traffic (AADT). By their very size and slower speeds, trucks lead to congestion and reduced Levels-of-Service on rural highways and local streets. In addition, emissions from trucks, like automobiles and railroad power units, have an adverse affect on air quality. While current legislation focuses on implementing Traffic Control Measures for passenger vehicles, TCMs do not specifically address truck usage.

Travel along the major corridors in the San Joaquin Valley is mostly in a north-south direction. State Route 99 and Interstate 5 are the primary north/south inter-regional routes used by trucks. Route 99 is a significant inter-regional route of statewide importance and carries most of the truck-transported agricultural goods. Many other state highways and county roads play major roles in distribution as well. As the Valley develops to support a more mobile and service-oriented population, the need for east-west travel corridors will become crucial. Special attention must be given to the regional routes to keep them in a serviceable condition and to avoid major reconstruction costs.

Cooperative efforts are needed between the trucking industry, the driving public, and local officials to assess the impacts that trucks have on local streets, and to create regulatory guidelines for trucks in urban areas. Alternative transportation modes for the long haul movement of goods should be explored and supported. These include improved intermodal freight transfer facilities and access at major airports and rail terminals.

The San Joaquin Valley has both agricultural and light industrial demands for trucking. The needs of individual growers and manufacturers to get their goods to major terminals, market places, and processing centers are met by trucks. In addition, trucks are used as feeder lines to distribute goods

from major rail, water, and air centers as well as supermarkets, shopping centers, etc. Because many Valley agricultural products are destined for world markets, efficient freight access at California export points must be ensured.

Rail

Trains provide an economical means of transporting bulk goods. Although each engine requires large amounts of fuel, its ability to haul large amounts of cargo makes for an overall low energy requirement per unit of weight when compared to highway or air transport.

The San Joaquin Valley is served by two major rail companies, the Union Pacific and Burlington Northern Santa Fe Railroads. The San Joaquin Valley Railroad (State Railways Inc.) operates a regional rail freight service between Tulare, Fresno and Kings Counties on 125 miles of leased Union Pacific branch lines connecting outlying areas to mainline carriers. The Modesto and Empire Traction Company tracks run between Modesto and Empire between the Union Pacific and Burlington Northern Santa Fe lines serving the Beard Industrial District. These rail systems and a number of local spur lines, move freight through the Valley daily.

Most cargo shipped by rail are bulk items such as grains, food products, vehicles, and fuels. Rail transport provides the option of specialized rail cars such as flatbeds, refrigerated box cars, fuel tankers, and piggy back cars. These specialized rail cars allow rail transport to move a large variety of goods giving rail an advantage over other modes of transportation for distances over 500 miles or more. Transport by rail is generally less expensive for long hauls than air or truck transport; however, rail is limited by speed and by the limitation of fixed rail track. An especially acute example of rail limitation is the rail route over the Tehachapi Summit in Kern County. Some of the route is single track, and although recent work on tunnels now allows for double-stacked containers to pass over the line, opposite traffic is often diverted to sidings, creating a freight bottleneck over, into, and out of the San Joaquin Valley.

Greater coordination and the integration of the various modes of freight transportation have become increasingly important in recent years. Limited resources and the intense pressure on existing transportation systems have caused rethinking and broad-based support for intermodal transportation systems. In order to allow goods movement to be more efficient and maintain a reasonable highway level of service, a public/private cooperation between these modes should be encouraged.

Rail/Truck Transfer Facilities

Rail/Truck transfer facilities for bulk and semi-bulk commodities are often not considered in narrow definitions of goods movement, but are a growing means of combining the efficiencies of the two modes for movement other than trailers and containers. Transfer facilities are basically of two types:

- Simple facilities for direct transfer between freight cars and trucks by means of conveyors, hoses, etc. without immediate storage or handling.
- More extensive facilities with the capability to store, sort, package, or otherwise process the commodity.

Rail Intermodal Facilities

Intermodal terminals are critical to the success of intermodal services. Terminals are the starting and ending points for trains, and the sites of crucial hands-off between modes. Terminals also function as equipment storage, maintenance, and dispatching centers, and as focal points for the flow of

information. Terminals vary widely in configuration, capacity, and operations, and only a few have been built from the ground up as intermodal facilities.

In the 1980s railroads consolidated their intermodal service networks into fewer, larger hub terminals. Railroads saw an opportunity to consolidate facilities in mergers, and a need to consolidate enough volume in one location to justify lift machines. The recent rapid growth of intermodal traffic, the enormous influx of double-stack trains of containers, and the even more recent entry and rapid growth of rail-truck trailer initiatives all raise questions about the adequacy of intermodal terminals to handle traffic increases, and to do so efficiently.

The Union Pacific Railroad has intermodal facilities in Fresno and Lathrop. Intermodal facilities for Burlington Northern Santa Fe Railroad are located in Stockton, Modesto, Fresno, and Bakersfield.

Buses

Passenger bus companies such as Greyhound and Orange Belt Stage Lines, provide carrier service in addition to their passenger service. Because of the small amounts handled, buses are a very minor contributor to goods movement in the region.

Air Service

Air service is characterized by the fast shipment of small bulk items of high value over long distances for high cost. Goods movement by air is an emerging element of freight movement in the San Joaquin Valley. State-wide, 23 out of the 43 commercial air carrier airports account for almost 3 million tons of freight transported by air. While air freight is a specialized mode of transportation, it accounts for an estimated 60 percent of the export values in California. Air carriers depend heavily on truck transportation to deliver goods for transport. It is, therefore, important to have adequate infrastructure in place for this significant element of the state economy.

A significant feature of air movement is its dependability and very short in-transit time. Businesses seeking to open new markets and in businesses dealing in high value items, air shipment is an important means of providing rapid access to distant manufacturing facilities and thereby eliminating large inventory requirements. In such cases, air shipment makes it possible to establish supply lines quickly and significantly lowers the cost of carrying inventory. This offsets the higher cost of the air mode.

Ports

The Stockton Deepwater Channel, with a 37-foot depth at average low tide and a 40-foot depth at average high tide, could accommodate 70 percent of the World's Bulk Fleet. Located 75 nautical miles due east of the Golden Gate Bridge, the Port of Stockton owns and operates a diversified and major transportation center that encompasses 600 acres. The Port officials estimate that, on average, 150 to 200 vessels use the Port each year. Included among the commodities that the Port handles are: dry bulk commodities, neo-bulk cargo (steel coils, steel products), general cargo, and liquid bulk cargoes (fertilizers, molasses, petroleum products, etc.). The Port's Beltline Railroad accesses all Port warehouses, transit sheds, and other facilities.

The Port of Stockton is an integral part of the state transportation system. The Port is immediately accessible to the interstate highway system. Convenient access by surface transportation to the entire United States is provided by Interstate 5, and all interconnecting major highway systems. Rail service is provided by three transcontinental railroads: Union Pacific and the Burlington Northern Santa Fe. The Port handles millions of tons of cargo that otherwise would be using the railroads or the roadways;

however, they continue to rely on both trucks and rail to deliver inbound cargo and distribute outbound cargo.

Pipelines

Various pipelines carry natural gas, crude oil, and other petroleum products through the San Joaquin Valley. Storage, pumping and branch line facilities are utilized to distribute those products.

Pacific Gas and Electric (PG&E) is responsible for the maintenance and operation of the natural gas line, while major petroleum corporations are responsible for the crude oil pipelines throughout the region.

Hazardous Materials Movement

Because more than 50 percent of all goods transported throughout the world are to some degree hazardous, there is potential danger to human life and property. Each year, more than 4 billion tons of hazardous products and waste are transported throughout the United States. Hazardous material can be transported by rail, small or large trucks, and possibly by air and pipelines.

At present, and for the foreseeable future, the largest volume of hazardous material is transported by large trucks. Truck transport accounts for about half of all hazardous material shipments. The types of vehicles carrying hazardous materials on the nation's highways range from tank trucks, bulk cargo carriers, and other specially designed mobile containers, to conventional tractor trailers and flat beds that carry packages, cylinders, drums and other small containers. Rail shipments are commonly bulk commodities, such as liquid or gaseous chemicals and fuels carried in tank cars.

The potentially adverse affects associated with the transportation of hazardous material can be partially mitigated by restricting roads available for hazardous material trucking. Under California law, transportation of hazardous waste is required to be carried out via the most direct route over interstate highways whenever possible. There are exceptions to this general rule, such as occasions when it is necessary to avoid highly congested areas and areas of high population density. Interstate 5 and most of State Route 99 are built to full freeway standards. Interstate 5 provides the service for north-south transporters and serves the inter-regional transport needs of local and long distance hazardous waste haulers. Interstate 5 has been proposed as a route for the transportation of radioactive materials. Route 99 is the major north-south artery connecting the north and south central San Joaquin Valley areas. Route 99 passes through the more populated areas of the San Joaquin Valley including Stockton, Modesto, Merced, Fresno, and Bakersfield.

Kings County, located in the southern region of the San Joaquin Valley, is the site of a Class I hazardous waste facility. This facility, located in the Kettleman Hills area of Kings County draws trucks carrying hazardous materials from all western states. The presence of these trucks on these regional routes increases the probability of dangerous spills.

Forecasts

California's seaports, airports, railroads, and highways together move about one billion tons annually overseas, across the Canadian and Mexican borders, to and from other states, and within the state. This volume of freight places a high demand on the state's transportation system. Much of this freight originates from, passes through, or comes to the San Joaquin Valley by various modes.

Economic development is one of the vital interests of the San Joaquin Valley. Hundreds of small and mid-sized companies are making decisions based upon their own best judgments about the extent of future goods movement. Much of this judgment is proprietary. It is expected that rail transport will continue to increase due to its ability to haul large amounts of long distance cargo at lower cost. Trucking is expected to increase because of its flexibility and timeliness. Potential increases in fuel costs will affect all modes of transportation.

Goods movement by bus will continue to be an alternative source for moving small goods. As the population in the Valley increases, airlines serving the regional airports are expected to introduce larger aircraft thereby expanding the air service area and making goods movement by air more a more viable option.

Pipelines will continue to be the most effective way of moving oil and gas through the region. There is likely to be an increase of fuel and natural gas use in the future because they are primary sources of energy.

Assumptions/Future Needs and Issues

The movement of goods by trucks is essential to the economy of the San Joaquin Valley. Trucking will continue to be the most inexpensive form of goods movement, and will continue to add to highway congestion. In addition, trucks, like cars, produce an adverse affect on air quality, and the presence of trucks carrying hazardous materials increases the probability of dangerous spills. Air and rail services are under utilized for the movement of goods; however, most goods will continue to be moved by trucks.

Action Plan

Short-Range Plan

State of California

- Pursue additional funding for street, road, highway, air, and rail projects by working with the League of California Cities and the County Supervisors Association of California to ensure the efficient movement of goods.
- Oppose higher axle load limits for the trucking industry.
- Encourage and support strict enforcement of transportation regulations concerning the transportation of hazardous material.
- Support and work with districts, local jurisdictions, regional agencies and the private sector to provide improved intermodal freight transfer facilities and access at major airports and rail terminals.
- Assess and incorporate, where appropriate, innovative intermodal linkage.
- Explore all viable options to facilitate freight movement while reducing conflicts between freight and passenger traffic.

Metropolitan Planning Agencies and Regional Transportation Planning Agencies

- Oppose higher axle load limits for the trucking industry.
- Provide technical and planning assistance to local jurisdictions for industrial and wholesale land use and transportation planning.

- Coordinate planning efforts to ensure efficient, economical and environmentally sound movement of goods.
- Support a higher safety level requirement for hazardous material transportation programs.
- Encourage the use of rail and air for the transportation of goods to reduce impacts to state and inter-county routes, and reduce air quality impacts.
- Encourage coordination and consultation between the public and private sectors to explore innovative strategies for the efficient movement of goods.
- Support the intermodal linkage of all freight transportation.

Counties and Cities

- Continue to evaluate and designate truck routes.
- Coordinate and consult with private sector providers in order to identify obstacles to the efficient movement of goods and develop alternative strategies.
- Seek strict enforcement of transportation regulations concerning the transport of hazardous substances.
- Consider locating industrial development near rail, airports, and major highways in the land-use elements of local General Plans.

Industry

- Increase the use of rail and air service for the movement of goods.
- Develop hazardous material transportation plans.

Long-Range Plan

- Continue to follow the objectives of the short-range plan.

1.5 FINANCIAL ELEMENT

The San Joaquin Valley contains urban and rural counties, self-help and non self-help counties, passenger rail and non-passenger rail counties and two Caltrans districts. Funding for transportation projects is subject to the north-south split requirements, county share requirements and availability of mitigation fees, local sales taxes, state and federal gas taxes, gasoline sales tax and bond revenues. No two counties are exactly alike. One aspect of transportation financing, however, which is common to all eight counties is that funding is not available to eliminate all long range deficiencies. Each county, in consultation with adjacent counties, cities, Caltrans, and the SJVUAPCD, must prioritize the use of available funds. The results of that process are shown in the financial elements of each of the eight regional transportation plans along with a detailed description of funds available.

Exhibit 1-12
San Joaquin Valley Long Range Transportation Plan
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